Rhythm in Mongolian Proverbs: Functions of Syllables and Morae

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This study analyzes the rhythm of Mongolian proverbs composed of two lines by considering the following aspects: (1) the number of syllables and morae, and (2) alliteration. Although some proverbs seem to produce a specific rhythm by arranging a certain number of syllables between two lines, this tendency is weak. The accordance rate for the number of morae between two lines is lower than that for syllables, suggesting that a mora does not function as a phonological unit for counting rhythm. On the other hand, the alliteration in Mongolian proverbs is a phenomenon corresponding to the first (C)V sequence (i.e., one mora between two lines). This indicates that the mora plays a rhythmic role in the Mongolian language.

Keywords: Mongolian proverbs, phonological unit, syllable, mora, alliteration

1. Introduction*

It is well known that language games, including some kinds of verses, can provide valid evidence for the existence of phonological categories such as *syllables*, *rhymes*, *morae*, and *feet*. English proverbs, for example, suggest that a syllable can be divided into an onset and a rhyme (Kubozono and Homma 2002: 51), as shown in (1), and Japanese short poems, Haiku, exemplify the existence of morae, as shown in the two examples in (2).

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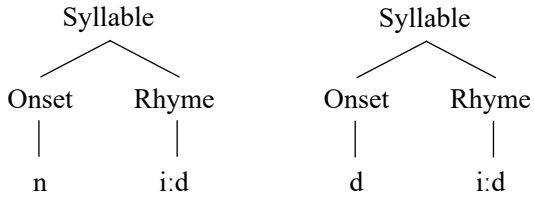
(1) A friend in need is a friend indeed.



(2) a. Furuikeya kawazutobikomu mizunooto
μμμμμ μμμμμμμμ μμμμμ
"The old pond; / A frog jumps in / The sound of the water." (Kinoshita 2019)
b. Ganjitsuni kawaiyahenro kadonitatsu
μμμμμ μμμμμμμ μμμμμ
"On New Year's Day / a cute little pilgrim / at the gate." (Lanoue 2000)

This study focuses on Mongolian proverbs. Although proverbs are widespread in Mongolian oral literature and often used in daily conversation, they have undergone little phonological research, and it is unclear whether certain phonological categories play a rhythmic role in Mongolian proverbs. This study thus addresses the number of syllables and morae, as well as alliteration, as rhythmic phenomena in Mongolian proverbs, analyzing their behaviors.

1.1. Mongolian proverbs

Mongolian proverbs are a form of Mongolian oral literature. They explain some teachings, thoughts, and the essence of phenomena by comparing them to other expressions (Bat-Ireedüi 2014: 94). Two examples of Mongolian proverbs are given in (3):[1]

(3) a. ed-eer bij-ee čim-x-eer
thing-INST body-REF adorn-FP-INST
erdm-eer bij-ee čim
wisdom-INST body-REF adorn (IMP)
"Adorn yourself not with things but with wisdom."

[1] In this paper, Mongolian is expressed with the phonological description, except the existence of epenthetic vowels; they are not normally regarded as phonemic vowels since both their quality and places are predictable from vowel harmony and syllable structure. For example, the word *erdem* 'wisdom' can be expressed as /erdm/, and an epenthetic vowel is phonetically inserted in order to avoid the unacceptable coda [rdm.], resulting in [er.dĕm]. When a suffix beginning with a vowel, for example instrumental *-eer*, is added to /erdm/, /erdm-eer/ is syllabified as [erd.me:r] and no epenthetic vowel is inserted (See Svantesson et al. 2005: 23 and 65−71, for details). These examples suggest that the vowel [ĕ] is not a phonemic but a phonetic one. However, the description without epenthetic vowels is intuitively difficult to understand the pronunciation. Therefore, the writing system with epenthetic vowels has adopted in this study. This writing system is partially based on Cyrillic orthography in Mongolian.

b. aaw-iiŋ sʊrgaal alt
father-GEN teaching gold
eeǰ-iiŋ sʊrgaal erdem
mother-GEN teaching wisdom
"Father's teaching is gold; Mother's teaching is wisdom."
(= Children should listen to their parents.)

Most Mongolian proverbs consist of two lines and form a couplet between them through alliteration (*e̲deer*–*e̲rdmeer* in [3a]), semantic correspondence (*aaw* "father"–*eeǰ* "mother" in [3b]), and/or through repetition of the same word (*bijee* and *čim* in [3a] and *sʊrgaal* in [3b]). Although these parallelisms seem to provide a specific rhythm to Mongolian proverbs, it is not entirely clear whether the rhythm is generated by arranging syllables and/or morae between the first and the second lines. In addition, it is not obvious what phonological principle governs the alliteration in Mongolian proverbs (i.e., whether the alliteration is a phenomenon corresponding only to the onset consonants or to larger constituents such as morae or syllables). Consequently, it is unclear whether syllables and morae play a rhythmic role in Mongolian proverbs.

1.2. *Rhythm*, *syllable*, and *mora* in Mongolian

Before Mongolian proverbs can be analyzed, it is necessary to define the terms *rhythm*, *syllable*, and *mora*.

According to Trask (1996), rhythm is defined as

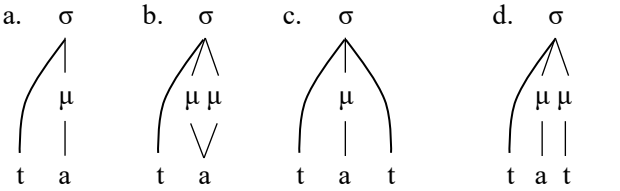
> The perceptual pattern produced in speech or poetry by the occurrence at regular intervals of prominent elements; these elements may be stresses (as in English), syllables (as in Spanish), heavy syllables (as in Ancient Greek) or moras (as in Japanese). (Trask 1996: 311)

However, this definition is too narrow to explain the specific rhythm in Mongolian proverbs because it is felt between larger domains: the first and the second lines. In this study, therefore, the term rhythm is used in a broader sense; phonological similarities are based on a repetition of phonological elements between two lines. Specifically, this study focuses on the number of syllables and morae, as well as instances of alliteration, as phonological elements. If, for example, the number of syllables is divided in a specific way between the first and second lines, e.g., if the same number of syllables is repeated between the two lines, then a phonological similarity can be felt; this is considered to be a kind of rhythm.

A syllable is "a fundamental but elusive phonological unit typically consisting of a short sequence of segment" (Trask 1996: 345). Although it is difficult to give a precise and general definition of a syllable, the Mongolian syllable can be defined as a sequence of segments that has a single vowel as its peak. Mongolian syllable structure can be schematized as (C)V(V)(C)(C)(C). V(V) is an indispensable vowel, which can be a short vowel V, a long vowel VV, or a diphthong VV, whereas (C) represents an optional consonant. See Svantesson (1995) and Svantesson et al. (2005) for details about Mongolian syllabic structures.

With respect to morae, Trask (1996: 226) simply defines a mora as "a phonological unit larger than a single segment but typically smaller than a syllable." In moraic theory (Hyman 1985; Hayes 1989), a mora is a syllabic element in a rhyme that represents the length of a segment. Thus, short vowels have one mora, whereas long vowels and diphthongs each have two morae. An onset consonant is never counted as a mora since it lies outside the rhyme, while a coda consonant may or may not be moraic. In other words, there are both moraic and non-moraic codas (Gussenhoven and Jacobs 2017: 137). The moraic representation of syllables is shown in (4). From the perspective of syllable weight, syllables with one mora are light (4a, c), and syllables with two morae are heavy (4b, d).

(4)



(Gussenhoven and Jacobs 2017: 137 (24))

Previous studies have shown that whether a coda consonant is moraic varies from one language to another, and this can be different depending on the processes involved, even in a single language (Steriade 1991; Hyman 1992; Hayes 1995; Gordon 2006; Davis 2014). For example, Steriade (1991) argued that only syllables with a long vowel or a diphthong (CVV) are counted as heavy syllables in stress assignment in Mongolian (5a),[2] while syllables with a short vowel and a coda consonant (CVC) – as well as CVV syllables – are regarded as heavy syllables according to the minimal weight constraint in Mongolian, which bans a word with only one light syllable (5b).

[2] In fact, it has been noted in previous literature that the Mongolian stress system is not straightforward. Karlsson (2005) claims that "no evidence can be found for the existence of lexical stress in Mongolian" (Karlsson 2005: 43). See also Hangin (1968), Walker (1997), Svantesson et al. (2005), for details about the stress system in Mongolian.

(5) a. Mongolian stress assignment (**bold** represents stressed syllables):
baa.tar “hero” ba.**raa** “merchandise” **baaw**.gai “bear”
ba.rag “almost” **bar**.dam “boastful” **ba**.rag.dax “to be dealt with”
= heavy syllable (μμ): CVV
= Stress is assigned on the first heavy syllable.

b. Mongolian minimal weight constraint:
ɔɔ “powder” ɔi “forest” ɔr “bed” ɔ.rɔŋ “country” *ɔ
= heavy syllable (μμ): CVV, CVC
= A word must have at least one heavy syllable or two light syllables.

Example (5) shows that coda consonants in Mongolian can be counted as a mora in some cases (5b) and not in others (5a). Therefore, there are two ways to count the number of morae, depending on whether a coda consonant is counted as a mora or not. In this paper, I use the terms *C-mora* and *V-mora* to represent such cases, respectively.

2. Methods of the three analyses

This section outlines the methods used to investigate the phonological roles of syllables and morae in Mongolian proverbs.

Data were collected from Shiotani’s *Comparative Research on Proverbs in Mongolian and Japanese* (2004). This book includes 100 Mongolian proverbs, and of those, 98 proverbs, consisting of two lines, were used in this study.

The analysis was conducted in three steps. First, the rhythm in each line was analyzed from the perspectives of the number of syllables, V-morae, and C-morae. These numbers were individually compared between the complete first and second lines (Analysis 1), as shown in (6a). Proverbs for which the number of phonological words in the first line did not correspond to the number in the second line were excluded from Analysis 1 (e.g., 6b); thus, 82 samples were included in Analysis 1.

(6)

				Syllables	V-morae	C-morae
a.	aa.w-iiŋ	sʊr.gaal	alt	5	8	13
	father-GEN	teaching	gold			
	ee.ǰ-iiŋ	sʊr.gaal	er.dem	6	9	14
	mother-GEN	teaching	wisdom			

“Father’s teaching is gold; Mother’s teaching is wisdom.”
(= Children should listen to their own parents.)

				Syllables	V-morae	C-morae
b.	ga.raa	saiŋ	bɔl	–	–	–
	start	good	COND			
	ba.rʲaa	saiŋ		–	–	–
	goal	good				

"A good beginning makes a good ending."

Second, the rhythm between paired words was examined; the numbers of syllables, V-morae, and C-morae were compared between a given word in the first line and its counterpart in the second line (Analysis 2). Words paired with the same word and those without a counterpart were excluded from the analysis. Example (7) illustrates the data used in Analysis 2; the underlined words are paired words, and the shaded words are those out of the scope of this analysis. As a result, 236 pairs (472 words) were included in Analysis 2.

(7)

			Syllables	V-morae	C-morae
ga.raa	saiŋ	bɔl	2	3	3
start	good	COND			
ba.rʲaa	saiŋ		2	3	3
goal	good				

"A good beginning makes a good ending."

Third, Analysis 3 focused on the alliteration between the first and the second lines. In this study, proverbs that satisfied the following two conditions were considered to exhibit alliteration: (i) The initial segments of each line are identical, and (ii) the first words of each line do not include the same root. By this definition, 40 proverbs were extracted as the data; these were coded for the number of segments that corresponded between the beginning of the first and the second lines. In this analysis, long vowels and diphthongs were regarded as vowel sequences (VV). For example, the first two segments *bɔ* (CV) correspond in (8a). Example (8b) illustrates an excluded proverb, which does not follow condition (ii) given above.

(8) a.

bɔrɔɔn-ii	ɵmən	šɔrɔɔ
rain-GEN	before	soil
bɔɔxɔi-ŋ	ɵmən	xeree
wolf-GEN	before	crow

"Soil is blown up before it rains; birds come before the wolves."

(= Upcoming events cast their shadows before them.)

b. ed med-e-x-gui xuŋ
thing know-EV-FP-NEG person
ed-iiŋ ner gʊtaa-dag
thing-GEN name disgrace-HAB
"People who do not know the value of a thing disgrace its name."
(= Pearls before swine.)

The proverbs in Shiotani (2004) are written in modern Cyrillic orthography, which is fundamentally based on the phonological representation in modern Mongolian. Although it may be appropriate to refer to older forms of each word in the proverbs, considering the fact that most of them have been present since ancient times, it is not easy to trace their history. This study was thus based on modern Cyrillic orthography for convenience.[3]

3. Results

This section presents the results of Analyses 1, 2, and 3 in Sections 3.1, 3.2, and 3.3, respectively.

3.1. The rhythm of each line: analysis 1

First, let us consider the rhythm of each line. Figure 1 shows the accordance rates of the number of syllables between the first and the second lines. The values after ± in the figure indicate disparities in the number of syllables between the first and the second lines. For example, ±0 means that the number of syllables in the first line is the same as that in the second line (e.g., 9a, b), and ±1 means that one line has an additional syllable compared to the other line (e.g., 9c). Complete agreement in the figure means that all pairs of words have the same number of syllables (e.g., 9a), while incomplete agreement means that paired words do not necessarily have the same number of syllables, although the sum of each line is the same (e.g., each line has 5 syllables in 9b). Similarly, Figures 2 and 3 show the accordance rates of V-morae and C-morae, respectively.

[3] Svantesson et al. (2005) claim that vowels written as long vowels (orthographically VV) in non-initial syllables are phonologically short because their durations are closer to those of initial short vowels than initial long vowels. According to this interpretation, the VV in non-initial syllables should be counted as one mora. However, Ueta (2019) argues that these vowels are essentially not short but long vowels, providing several pieces of evidence. In addition, it has been determined that these vowels have developed historically from long vowels. In this study, the VV in non-initial syllables were counted as two morae, following Ueta (2019).

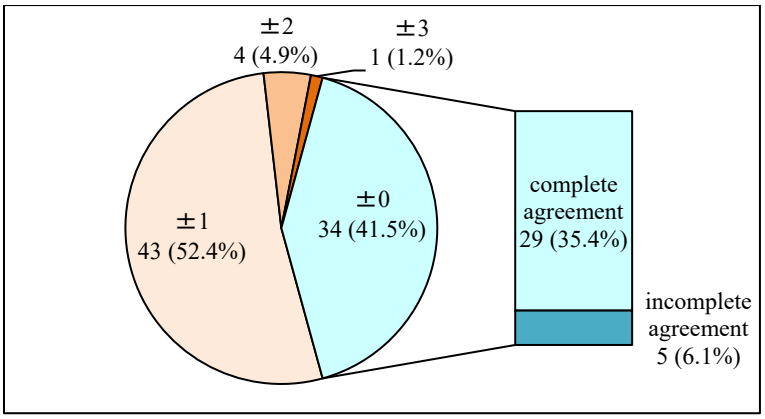


Fig. 1 Accordance rates of the number of syllables in each line

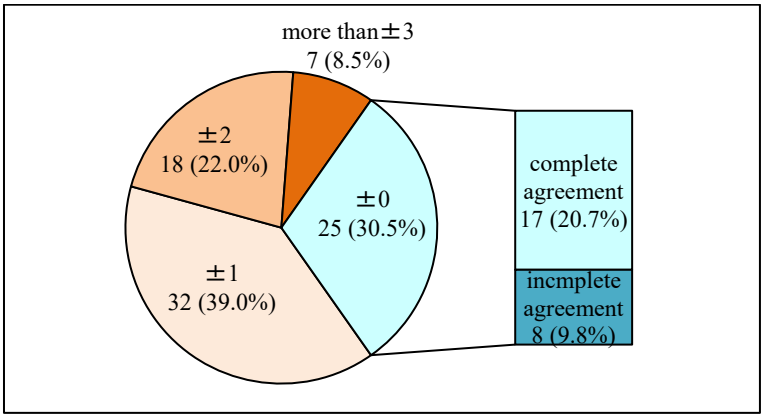


Fig. 2 Accordance rates of the number of V-morae in each line

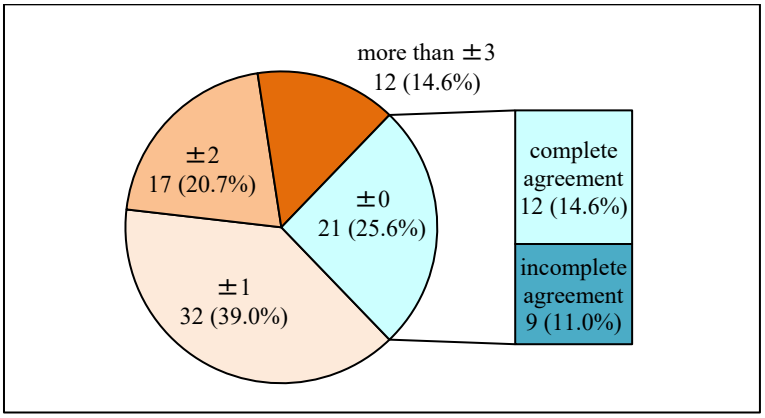


Fig. 3 Accordance rates of the number of C-morae in each line

(9)

				Syllables	V-morae	C-morae
a.	a.w-a-x	xuŋ	bɵ.xii-x	5 (2+1+2)	6 (2+1+3)	9 (3+2+4)
	get-EV-FP	person	bow-FP			
	ɵ.g-ɵ-x	xuŋ	ge.dii-x	5 (2+1+2)	6 (2+1+3)	9 (3+2+4)
	give-EV-FP	person	lean backwards-FP			
	“Receiver becomes polite, giver becomes arrogant.”					
	(= An angel in borrowing; a devil in repaying.)					

				Syllables	V-morae	C-morae
b.	i.d-e-x.-d-ee	er	bar	5 (3+1+2)	6 (4+1+1)	9 (5+2+2)
	eat-EV-FP-DAT-REF	male	tiger			
	xii-x.-d-ee	xa.šiŋ	bʊx	5 (2+2+1)	7 (4+2+1)	10 (5+3+2)
	do-FP-DAT-REF	slow	bull			
	“Eating fast like a male tiger, working slowly like a bull.”					
	(= Lazy people rush to eat.)					

				Syllables	V-morae	C-morae
c.	bɔ.rɔɔ.n-ii	ɵ.mɵn	šɔ.rɔɔ	7 (3+2+2)	10 (5+2+3)	11 (5+3+3)
	rain-GEN	before	soil			
	bɔɔ.xɔi-ŋ	ɵ.mɵn	xe.ree	6 (2+2+2)	9 (4+2+3)	11 (5+3+3)
	wolf-GEN	before	crow			
	“Soil is blown up before it rains, birds come before the wolves.”					
	(= Upcoming events cast their shadows before them.)					

Figure 1 shows that 34 out of 82 proverbs (41.5%) have the same number of syllables in the first and the second lines, and the number of syllables between the lines differs in more than half of the sample. This suggests that the tendency of the lines to have the same number of syllables is weak, considering the fact that some proverbs in Analysis 1 include an identical word in both lines. The accordance rates of V-morae and C-morae, as shown in Figures 2 and 3, are 30.5% and 25.6%, respectively, both of which are lower than for syllables.

Moreover, matching numbers of syllables, V-morae, and C-morae can be attributed to coincidence. Although each line of a given proverb may consist of the same number of phonological words, the number of phonological words in a line itself varies between proverbs. For example, each line of (9a) and (9b) is composed of three phonological words, while the lines of (9c) each consist of four. According to the results of Analysis 1, the number of phonological words in a line ranges from 2 to 7, the average is 3.26, and the mode is 3. It can be easily predicted that the more phonological words a line includes, the more syllables, V-morae, and C-morae the line tends to have, and as a result, the less likely it is for the lines to have the same number. Tables 1−3 represent the relationship between

the number of phonological words in a line and the disparities in the number of syllables, V-morae, and C-morae, respectively.

Table 1 Number of phonological words and syllable disparities

Syllable	Number of Phonological Words in a Line				Sum
	2	3	4	> 5	
±0	9 (56.25%)	16 (42.11%)	8 (34.78%)	1 (20.00%)	34
> ±1	7 (43.75%)	22 (57.89%)	15 (65.22%)	4 (80.00%)	48
Sum	16 (100.00%)	38 (100.00%)	23 (100.00%)	5 (100.00%)	82

Table 2 Number of phonological words and V-mora disparities

V-mora	Number of Phonological Words in a Line				Sum
	2	3	4	> 5	
±0	5 (31.25%)	12 (31.58%)	6 (26.09%)	2 (40.00%)	25
> ±1	11 (68.75%)	26 (68.42%)	17 (73.91%)	3 (60.00%)	57
Sum	16 (100.00%)	38 (100.00%)	23 (100.00%)	5 (100.00%)	82

Table 3 Number of phonological words and C-mora disparities

C-mora	Number of Phonological Words in a Line				Sum
	2	3	4	> 5	
±0	5 (31.25%)	10 (26.32%)	3 (13.04%)	3 (60.00%)	21
> 1	11 (68.75%)	28 (73.68%)	20 (86.96%)	2 (40.00%)	61
Sum	16 (100.00%)	38 (100.00%)	23 (100.00%)	5 (100.00%)	82

Tables 1−3 show a similar tendency: The more phonological words a line includes up to 4, the lower the rate of ±0. This suggests that the accordance of the number of syllables, V-morae, and C-morae is to some extent caused by coincidence.

3.2. The rhythm between paired words: analysis 2

This section presents the results of Analysis 2. Figure 4 shows the accordance rate of the number of syllables between paired words. Here, ±0 means that the number of syllables between paired words is identical (e.g., 10a), and ±1 indicates that one of the paired words has an additional syllable compared to its counterpart (e.g., 10b). Figures 5 and 6 show, in a similar fashion, the accordance rates of the number of V-morae and C-morae between paired words, respectively.

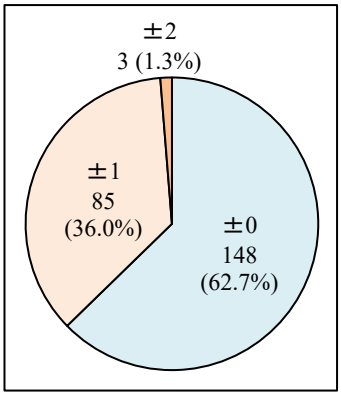


Fig. 4 Syllables

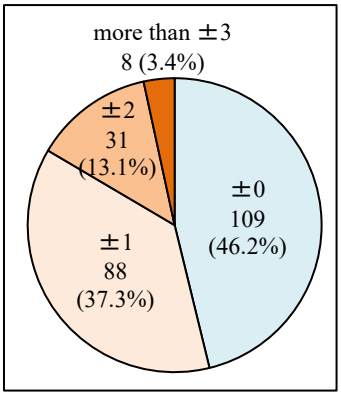


Fig. 5 V-morae

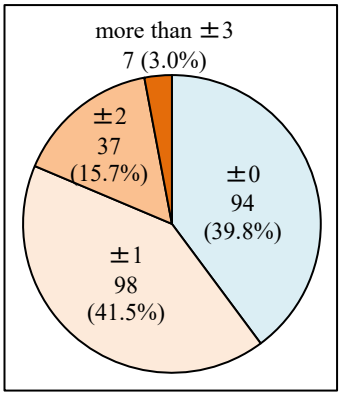


Fig. 6 C-morae

(10)

				Syllables	V-morae	C-morae
a.	mʊʊ	mʊʊ.-d-aa	e.rel.xuu	1	2	2
	bad	bad-DAT-REF	arrogant			
	mʊn	gad.san.-d-aa	e.rel.xuu	1	2	2
	mallet	peg-DAT-REF	arrogant			

"The weak is arrogant to the weak, a mallet is arrogant to a peg."
(= bullying the weak)

				Syllables	V-morae	C-morae
b.	mʊʊ	mʊʊ.-d-aa	e.rel.xuu	2	4	4
	bad	bad-DAT-REF	arrogant			
	mʊn	gad.san.-d-aa	e.rel.xuu	3	4	6
	mallet	peg-DAT-REF	arrogant			

Figures 4–6 show that the accordance rate for the number of syllables (62.7%) is higher than that of V-morae (46.2%) and C-morae (39.8%). This order is the same as that in Analysis 1.

Although at first glance it seems that the accordance rate of syllables (62.7%) is relatively high, the number of syllables between paired words can be due to coincidence. All but two words in Analysis 2 (99.6%) are composed of either one, two, or three syllables. If these appeared at the same frequency and two of these words were selected at random, the probability that they would have the same number of syllables would be 33.3%. In reality, however, words with two syllables appear far more frequently than the others in this sample, as shown in Table 4. If two words were randomly selected from this set, there would be a 47.4% chance that they would have the same number of syllables.[4] It is true that the

[4] This was calculated as follows: ${}_{85}C_2+{}_{303}C_2+{}_{82}C_2+{}_{2}C_2/{}_{472}C_2$.

accordance rate (62.7%) is still higher, but it would be reasonable to say that the tendency for paired words to have the same number of syllables is, again, not absolutely strong.

Table 4 Distribution of the number of syllables

Syllable	1σ	2σ	3σ	4σ	Sum
Token	85 (18.0%)	303 (64.2%)	82 (17.4%)	2 (0.4%)	472 (100%)

Table 5 Distribution of the number of V-morae

V-morae	1μ	2μ	3μ	4μ	5μ	6μ	Sum
Token	60 (12.7%)	154 (32.6%)	162 (34.3%)	70 (14.8%)	25 (5.3%)	1 (0.2%)	472 (100%)

Table 6 Distribution of the number of C-morae

C-morae	2μ	3μ	4μ	5μ	6μ	7μ	Sum
Token	51 (10.8%)	135 (28.6%)	150 (31.8%)	86 (18.2%)	44 (9.3%)	6 (1.3%)	472 (100%)

The same holds true for V-morae and C-morae. The distribution of the number of V-morae and C-morae in the words in the sample are shown in Tables 5 and 6, and the probability of coincidence is 26.4% and 23.5%,[5] respectively. The accordance rates (46.2% for V-morae and 39.8% for C-morae) were higher than these percentages, but it could not be said that the accordance rates are particularly high.

3.3. Alliteration and phonological units: analysis 3

Let us now turn to the results of Analysis 3. Figure 7 shows the types of corresponding segments of alliteration in the proverbs and their distribution. The C in Figure 7, for example, indicates that only the first consonants of each line correspond, as in (11a). Examples (11b, c) show proverbs in which only the first V (11b) and the first CV (11c) correspond, respectively.

[5] The formulae were ${}_{60}C_2+{}_{154}C_2+{}_{162}C_2+{}_{70}C_2+{}_{25}C_2+{}_{1}C_2/{}_{472}C_2$ and ${}_{51}C_2+{}_{135}C_2+{}_{150}C_2+{}_{86}C_2+{}_{44}C_2+{}_{6}C_2/{}_{472}C_2$.

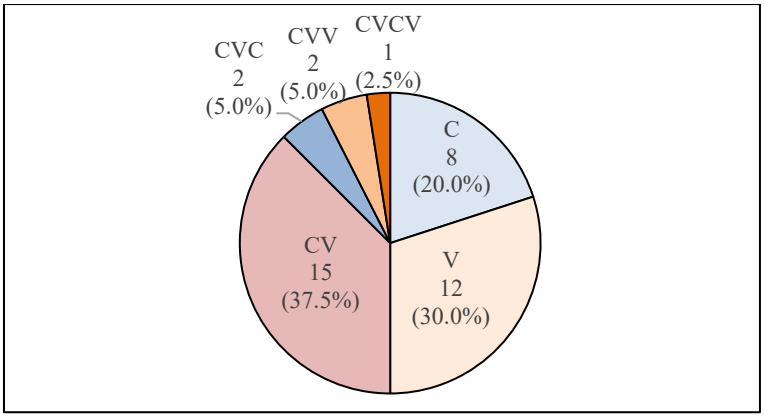


Fig. 7 Corresponding segments

(11) a. xel-x-e-d amarxan
say-FP-EV-DAT easy
xii-x-e-d xetsuu
do-FP-EV-DAT difficult
"Easy to say, hard to do."

b. ɔr-ɔ-x ɔrɔŋ-gui
enter-EV-FP dwelling-NEG
ɔɔč-i-x ajaɢ-gui
sip-EV-FP cup-NEG
"There is neither a house nor a cup." (= very poor)

c. sawaagui nɔxɔi
curious dog
saran-d xʊʦ-a-x
moon-DAT bark-EV-FP
"When one kills a snake, the stick is useless." (= useless things)

As shown in Figure 7, cases with alliteration of an initial CV sequence are the most frequent (37.5%), followed by cases with alliteration of only the first V (30.0%). These can be combined as alliteration that corresponds to the first mora from the perspective of phonological units larger than a segment.[6] In other words, 67.5% of tokens exhibit alliteration of one mora. This is much more frequent than the alliteration of only C (20.0%). Although syllables can generally be divided into an onset and a rhyme, and alliteration is

[6] As shown in (4), onset segments are not directly connected to μ. Viewed in this light, it might not be accurate to say that the CV forms one mora. However, generally speaking, it seems unproblematic to regard the CV sequence as a mora, as can be seen from this example: Japanese Hiragana are said to be "moraic" letters, and the letter カ represents one mora, *ka*.

often said to be a phenomenon that repeats the same onset (Kubozono and Homma 2002: 46−49), the alliteration in Mongolian proverbs proves to be a phenomenon involving not the onset, but the first mora. Moreover, the other types of alliteration (CVC, CVV, CVCV) can also be interpreted as a subgroup of mora alliteration in the sense that they involve the alliteration of at least one initial mora.

In contrast, syllables do not function as a unit of alliteration at all in Mongolian proverbs; there were only five proverbs in which the two lines share the same first syllable, and all of them begin with an open syllable with a short vowel (CV) like (11c), which coincides with the first mora. In other words, there were no data that had to be interpreted as corresponding to the first syllable.

In summary, the alliteration in Mongolian proverbs is governed by the mora, and not by the syllable or onset. In other words, the mora plays an important rhythmic role in the alliteration of Mongolian proverbs.

4. Discussion and conclusion

The previous sections presented the results of the three analyses; this section discusses the role of syllables and morae in the rhythm of Mongolian proverbs.

Analyses 1 and 2 found that the accordance rates for the number of morae, both V-morae and C-morae, between the two lines are lower than those of syllables, both for each line and for paired words. This suggests that the mora does not function as a rhythmic unit in terms of the number that occur in a proverb. Compared with morae, the accordance rate of syllables is relatively high. However, as shown in Sections 3.1 and 3.2, the tendency for the two lines to have the same number of syllables is not very strong. Thus, arranging the number of syllables seems to be just one method that can be used to produce a specific rhythm, along with the repetition of specific words and alliteration, rather than a necessary condition.

In contrast, it is the mora that bears the alliteration in Mongolian proverbs, a phenomenon in which the first mora ([C]V) agrees in both lines. This provides valid evidence for the existence of the mora as a phonological category in Mongolian. The syllable, in contrast, does not participate in alliteration at all, nor does the onset. This means that analyses in which the syllable is divided into an onset and a rhyme are not applicable at least to Mongolian alliteration.

This study reveals that the mora functions as an active phonological unit in alliteration, but not in counting rhythm. Similarly, syllables do not play a role in alliteration, but they behave as an active phonological unit in other fields. Some previous studies have suggested that syllables and morae are, in general, not alternatives to but compatible with one another. Kubozono and Homma (2002) state the following:

> Both syllables and morae are basic units that languages commonly have, and it is no wonder that they both play important roles in a single language system. Rather, the mora and syllable seem to have a complementary relationship and play a complementary role in a single language. (Kubozono and Homma 2002: 56)

In the phonological system of the Mongolian language as well, syllables and morae both exist and play complementary roles.

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Abbreviations

COND	conditional	IMP	imperative
DAT	dative	INST	instrumental
EV	epenthetic vowel	NEG	negative
FP	future participle	REF	reflexive
GEN	genitive	.	syllable boundary
HAB	habitual	-	morpheme boundary

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